What Is Claimed Is:

1.   A color image pickup element, comprising:

    groups of image pickup elements provided for a plurality of colors, each image pickup element group including a plurality of image pickup elements linearly arranged in rows on a substrate,

    wherein a row of image pickup elements in the image pickup element group and another row of image pickup elements in the same image pickup element group are arranged such that respective image pickup elements match in position in a direction in which the image pickup elements are arranged.

2.   The color image pickup element according to claim 1, wherein the groups of image pickup elements are provided so as to correspond to a red color, a green color, and a blue color.

3.   An image reader, comprising:

    a color image pickup element including groups of image pickup elements provided for a plurality of colors, each image pickup element group including a plurality of image pickup elements linearly arranged in rows on a substrate, wherein a row of image pickup elements in the image pickup element group and another row of image pickup elements in the same image pickup element group are arranged such that respective image pickup elements

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11. match in position in a direction in which the image

12. pickup elements are arranged;

13. a light source illuminating an original;

14. a plurality of mirrors reflecting light which

15. has originated from the light source and has been

16. reflected from or passed through the surface of the

17. original;

18. a light-gathering lens gathering the light

19. reflected from the mirrors onto the color image

20. pickup element;

21. an analog-to-digital conversion section

22. subjecting to analog-to-digital conversion pixel

23. data output from the color image pickup element;

24. a pixel data storage device storing pixel data

25. which have been subjected to analog-to-digital

26. conversion by the analog-to-digital conversion

27. section; and

28. an averaging device subjecting to averaging

29. operation a plurality of pixel data sets which are

30. stored in the pixel data storage device, have been

31. read at different times from the same position with

32. reference to a direction in which image pickup

33. elements of the respective image pickup element

34. rows are arranged, and outputs a result of

35. averaging operation as one set of pixel data.

1. 4.  An image reader, comprising:

a color image pickup element including groups
of image pickup elements provided for a plurality
of colors, each image pickup element group
including a plurality of image pickup elements
linearly arranged in rows on a substrate, wherein
a row of image pickup elements in the image pickup
element group and another row of image pickup
elements in the same image pickup element group are
arranged such that respective image pickup elements
match in position in a direction in which the image
pickup elements are arranged;

a light source  illuminating an original;

a plurality of mirrors  reflecting light which
has originated from the light source and has been
reflected from or passed through the surface of the
original;

a light-gathering lens  gathering the light
reflected from the mirrors onto the color image
pickup element;

an  analog-to-digital  conversion  section
subjecting to analog-to-digital conversion pixel
data output from the color image pickup element;

a pixel data storage device storing pixel data
which have been subjected to analog-to-digital
conversion by the analog-to-digital conversion
section; and

an  addition  device  subjecting  to  adding
operation a plurality of pixel data sets which are

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30. stored in the pixel data storage device, have been

31. read at different times from the same position with

32. reference to a direction in which image pickup

33. elements of the respective image pickup element

34. rows are arranged, and outputs a result of adding

35. operation as one set of pixel data.

1. 5.    An image reading method for use with an image

2. reader including a color image pickup element

3. including groups of image pickup elements provided

4. for a plurality of colors, each image pickup

5. element group including a plurality of image pickup

6. elements linearly arranged in rows on a substrate,

7. wherein a row of image pickup elements in the image

8. pickup element group and another row of image

9. pickup elements in the same image pickup element

10. group are arranged such that respective image

11. pickup elements match in position in a direction in

12. which the image pickup elements are arranged; a

13. light source  illuminating an original; a plurality

14. of mirrors  reflecting light which has originated

15. from the light source and has been reflected from

16. or passed through the surface of the original; and

17. a  light-gathering  lens    gathering  the  light

18. reflected from the mirrors onto the color image

19. pickup element, the method comprising:

an analog-to-digital conversion step for subjecting to analog-to-digital conversion pixel data output from the color image pickup element;

a pixel data storage step for storing pixel data which have been subjected to analog-to-digital conversion by the analog-to-digital conversion section; and

an averaging step for subjecting to averaging operation a plurality of pixel data sets which are stored in the pixel data storage device, have been read at different times from the same position with reference to a direction in which image pickup elements of the respective image pickup element rows are arranged, and outputs a result of averaging operation as one set of pixel data.

6. An image reading method for use with an image reader including a color image pickup element including groups of image pickup elements provided for a plurality of colors, each of image pickup element group including a plurality of image pickup elements linearly arranged in rows on a substrate, wherein a row of image pickup elements in the image pickup element group and another row of image pickup elements in the same image pickup element group are arranged such that respective image pickup elements match in position in a direction in which the image pickup elements are arranged; a

light source illuminating an original; a plurality

of mirrors reflecting light which has originated

from the light source and has been reflected from

or passed through the surface of the original; and

a light-gathering lens gathering the light

reflected from the mirrors onto the color image

pickup element, the method comprising:

an analog-to-digital conversion step for

subjecting to analog-to-digital conversion pixel

data output from the color image pickup element;

a pixel data storage step for storing pixel

data which have been subjected to analog-to-digital

conversion by the analog-to-digital conversion

section; and

an addition step for subjecting to adding

operation a plurality of pixel data sets which are

stored in the pixel data storage device, have been

read at different times from the same position with

reference to a direction in which image pickup

elements of the respective image pickup element

rows are arranged, and outputs a result of adding

operation as one set of pixel data.